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AUGUST 1979
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(9) METEOROLOGICAL DATA REPORT

(6) 1976 2D GSRS
Missile No. 003
Round No. B-29
9 August 1979

Number

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White Sands Meteorological Team

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(11) Aug 79

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND

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19 KEY WORDS (Continue on reverse side if necessary and identify by block number)

1. Ballistics
2. Meteorology
3. Winds

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Meteorological data gathered for the launching of 19702 D GSRS, Missile Nr. 003, Round Number B-29, are presented in tabular form.

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INTRODUCTION

19702D GSRS , Missile Number 003 , Round Number B-29 , was launched from LC-33 , White Sands Missile Range (WSMR), New Mexico, at 1310 MDT, 9 August 1979 . The scheduled launch time was 1145 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standar' surface observations to include pressure, temperature (°C), relative humidity, dew point (°C), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

1. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

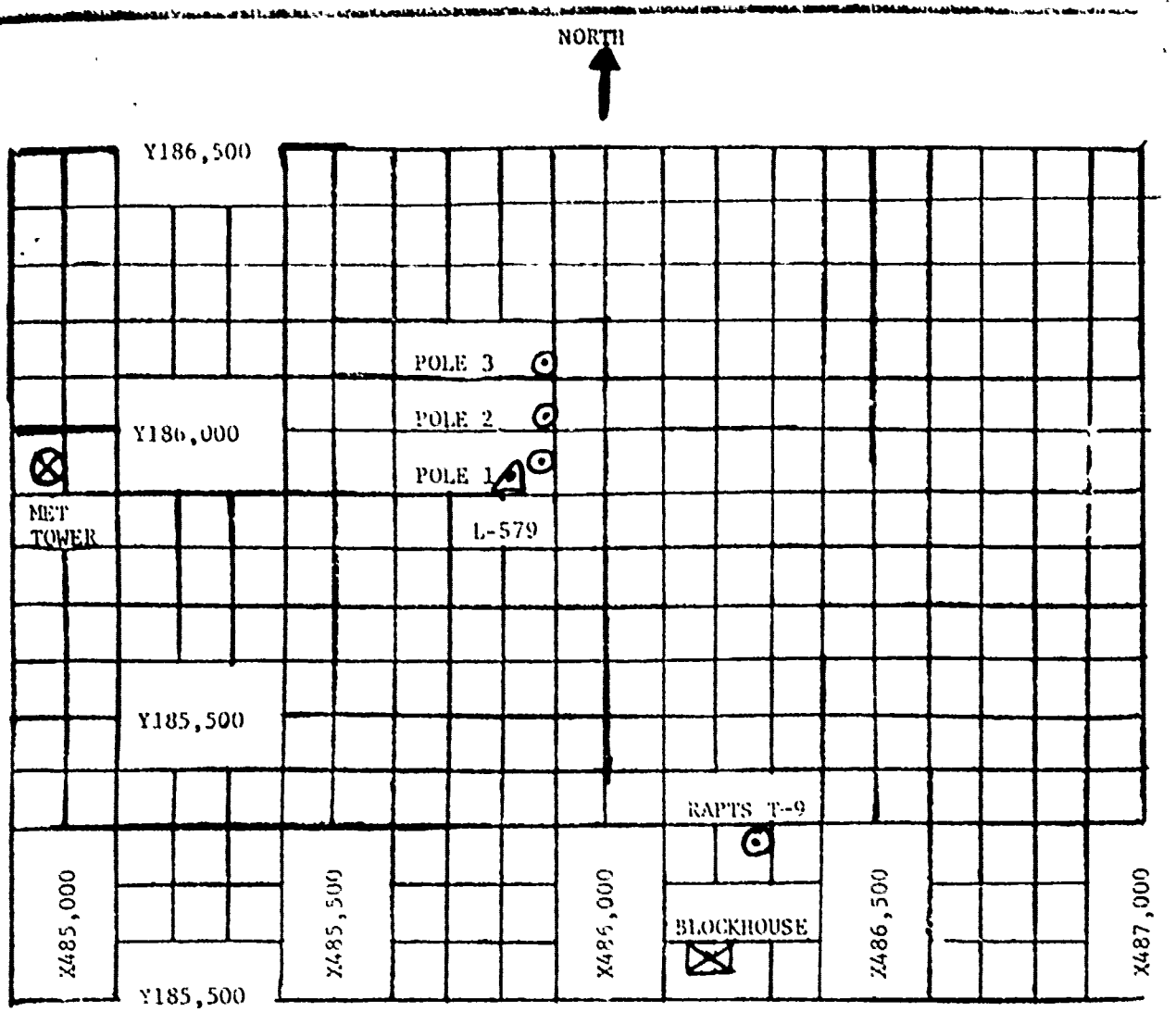
SITE AND ALTITUDE

LC-33 1020 Meters
NICK 1080 Meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 105,000 feet in 500-feet increments.

SITE AND TIME

SMR 1200 MST



1. MET TOWER - 4 Bendix Model T-20 Anemometers at 1.5 ft, 6.5 ft, 102 ft, and 202 ft with E/A recorders.

2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders.

   (a) Pole #1 - 38.7 ft

   (b) Pole #2 - 53.0 ft

   (c) Pole #3 - 83.6 ft

3. RAPTS T-9 Radar Automatic Pilot-Balloon Tracking System T-9 Radar.

TABLE 1. Surface Observations Taken at 1310 MDT, 9 August 1979, at LC-33, 19702D GSRS, Missile Number 003, Round Number B-29.

ELEVATION	3977.30	FT/MSL
PRESSURE	881.8	MBS
TEMPERATURE	34.2	°C
RELATIVE HUMIDITY	29	%
DEW POINT	13.5	°C
DENSITY	992	GM/M^3
WIND SPEED	07	MPH
WIND DIRECTION	220	DEGREES
CLOUD COVER	3	Cb

TABLE 2. LC-33 FIXED POLE ANEMOMETER-MEASURED WINDS

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	138	08	-30	169	09	-30	116	11
-20	138	08	-20	144	08	-20	110	11
-10	152	07	-10	165	06	-10	087	11
0.0	147	07	0.0	[illegible]	07	0.0	105	10
+10	123	10	+10	127	07	+10	105	11

Type 19702 D GSRS, Missile No. 003, Round No. B-29 launched from LC-33 on 9 August 1979 at 1310 MDT.

POLE #1 = X485,874.29 Y185,953.90 H4018.74 38.7 ft. AGL

POLE #2 = X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL

POLE #3 = X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL

NOTE: Wind directions are referenced True North.

TABLE 3. LC-33 METEOROLOGICAL TOWER ANEMOMETER-MEASURED WINDS (202 FT. TOWER)

LEVEL #1 12 ft.			LEVEL #2 62 ft.		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	144	08	-30	141	11
-20	151	09	-20	141	11
-10	145	10	-10	126	10
0.0	161	09	0.0	129	09
+10	160	08	+10	125	08
LEVEL #3 102 ft.			LEVEL #4 202 ft.		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	150	10	-30	140	10
-20	152	12	-20	140	10
-10	136	11	-10	144	11
0.0	142	10	0.0	137	10
+10	131	08	+10	141	12

WTSM Coordinates: X484,982.64 Y185,957.73 H3983.00 (base)

Type 19702 D GSRS, Missile No. 003, Round No. B-29 launched from LC-33 on 09 August 1979 at 1310 MDT

NOTE: Wind directions are referenced True North.

PILOT BALLOON MEASURED WIND DATA*
(30 meter increments)

TABLE 4

RELEASED FROM LC-33 DATE 9 August 1979 TIME 1300 MDT

RELEASE POINT COORDINATES (WSTM) X=486,037.24 Y=182,350.16 H=3977.30

MISSILE TYPE 19702D GSRS MISSILE NO. 003 ROUND NO. B-29

MISSILE LAUNCHED FROM LC-33 DATE 9 August 1979 TIME 1310 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TRUE NORTH.

HEIGHT mtrsAGL	DIRECTION DEGREES	SPEED MPH
SFC	180	03.0
30	185	03.0
60	189	02.5
90	192	02.5
120	195	02.5
150	183	04.0
180	170	05.5
210	167	05.5
240	163	05.0
270	163	06.5
300	163	08.0
330	171	09.5
360	179	10.5

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
390	165	11.0
420	151	11.0
450	158	11.5
480	164	12.0
510	171	11.5
540	177	11.0
570	168	11.5
600	159	11.5
630	170	11.0
660	180	10.0
690	167	09.0
720	153	08.0
750	153	08.5

DELAS-MS-MT-WS Form 46A
1 APRIL 79

Replaces AMSEL-BL-MT-WS Form 46
which are obsolete.

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HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
780	152	08.5
810	153	07.5
840	154	06.0
870	157	07.5
900	159	09.0
930	161	08.5
960	163	07.5
990	164	08.0
1020	165	08.5
1050		
1080		
1110		
1140		
1170		
1200		
1230		
1260		
1290		
1320		
1350		
1380		
1410		

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
1440		
1470		
1500		
1530		
1560		
1590		
1620		
1650		
1680		
1710		
1740		
1770		
1800		
1830		
1860		
1890		
1920		
1950		
1980		
2010		
2040		
2070		

DELAS-MS-MT-WS Form 46A (page 2)
1 APRIL 79

PILOT BALLOON MEASURED WIND DATA*
(30 meter increments)

TABLE 5

RELEASED FROM LC-33 DATE 9 August 1979 TIME 1310 MDT

RELEASE POINT COORDINATES (WSTM) X= 486,037.24 Y= 182,350.16 H= 3,977.30

MISSILE TYPE 19702 D GSRS MISSILE NO. 003 ROUND NO. B-29

MISSILE LAUNCHED FROM LC-33 DATE 9 August 1979 TIME 1310 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TRUE NORTH.

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
SFC	220	07.0
30	210	06.0
60	200	05.0
90	190	04.0
120	180	02.5
150	184	09.0
180	188	15.0
210	196	14.5
240	204	13.5
270	191	12.0
300	177	10.0
330	171	10.5
360	165	10.5

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
390	161	11.0
420	156	11.5
450	156	11.5
480	155	11.0
510	160	11.5
540	164	11.5
570	167	11.5
600	170	11.0
630	172	11.5
660	173	12.0
690	177	11.0
720	180	09.5
750	176	08.5

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
780	171	07.5
810	161	09.0
840	151	10.0
870	163	09.0
900	174	07.5
930	179	08.0
960	184	08.5
990	187	08.5
1020	189	08.0
1050		
1080		
1110		
1140		
1170		
1200		
1230		
1260		
1290		
1320		
1350		
1380		
1410		

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
1440		
1470		
1500		
1530		
1560		
1590		
1620		
1650		
1680		
1710		
1740		
1770		
1800		
1830		
1860		
1890		
1920		
1950		
1980		
2010		
2040		
2070		

PILOT BALLOON MEASURED WIND DATA*
(30 meter increments)

TABLE 6

RELEASED FROM NICK DATE 9 August 1979 TIME 1300 MDT

RELEASE POINT COORDINATES (WSTM) X= 470,734.56 Y= 255,775.64 H= 4,126.57

MISSILE TYPE 19702D GSRS MISSILE NO. 003 ROUND NO. B-29

MISSILE LAUNCHED FROM LC-33 DATE 9 August 1979 TIME 1310 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TRUE NORTH.

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
SFC	135	03.0
30	136	04.0
60	136	04.5
90	149	03.5
120	162	02.5
150	123	02.0
180	083	01.5
210	091	02.5
240	099	03.0
270	106	03.5
300	113	04.0
330	139	02.5
360	165	01.0

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
390	161	02.5
420	157	04.0
450	147	04.0
480	136	04.0
510	144	04.0
540	151	04.0
570	154	03.5
600	156	02.5
630	164	03.5
660	172	04.5
690	168	04.0
720	163	03.0
750	176	03.0

DELAS-MS-MT-WS Form 46A
1 APRIL 79

Replaces AMSEL-BL-MT-WS Form 46 which are obsolete.

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
780	188	03.0
810	201	03.5
840	214	03.5
870	211	04.0
900	208	04.5
930	204	05.0
960	195	05.0
990	204	05.0
1020	209	05.0
1050	211	05.0
1080	213	04.5
1110		
1140		
1170		
1200		
1230		
1260		
1290		
1320		
1350		
1380		
1410		

HEIGHT mtrs AGL	DIRECTION DECREES	SPEED MPH
1440		
1470		
1500		
1530		
1560		
1590		
1620		
1650		
1680		
1710		
1740		
1770		
1800		
1830		
1860		
1890		
1920		
1950		
1980		
2010		
2040		
2070		

PILOT BALLOON MEASURED WIND DATA*
(30 meter increments)

TABLE 7

RELEASED FROM NICK DATE 9 August 1979 TIME 1310 MDT

RELEASE POINT COORDINATES (WSTM) X= 470,734.56 Y= 255,755.64 H= 4,126.57

MISSILE TYPE 19702D GSRS MISSILE NO. 003 ROUND NO. B-29

MISSILE LAUNCHED FROM LC-33 DATE 9 August 1979 TIME 1310 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TRUE NORTH.

HEIGHT mtrsAGL	DIRECTION DEGREES	SPEED MPH
SFC	140	04.0
30	138	04.5
60	136	04.5
90	130	03.5
120	124	02.0
150	145	02.5
180	165	02.5
210	148	03.5
240	131	04.0
270	127	03.5
300	122	02.5
330	113	08.5
360	104	14.5

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
390	110	09.5
420	116	04.5
450	126	04.0
480	135	03.5
510	136	04.0
540	136	04.0
570	150	04.5
600	163	05.0
630	154	04.0
660	145	02.5
690	159	03.5
720	172	04.5
750	171	04.5

DELAS-MS-MT-WS Form 46A
1 APRIL 79

Replaces AMSEL-BL-MT-WS Form 46 which are obsolete.

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
780	170	04.0
810	155	04.5
840	139	05.0
870	142	04.5
900	145	04.0
930	135	04.5
960	124	04.5
990	138	03.5
1020	151	02.5
1050	160	04.0
1080	168	05.0
1110		
1140		
1170		
1200		
1230		
1260		
1290		
1320		
1350		
1380		
1410		

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
1440		
1470		
1500		
1530		
1560		
1590		
1620		
1650		
1680		
1710		
1740		
1770		
1800		
1830		
1860		
1890		
1920		
1950		
1980		
2010		
2040		
2070		

DELAS-MS-MT-WS Form 46A (page 2)
1 APRIL 79

STATION ALTITUDE 3997.30 FEET MSL
9 AUG. 79 1200 HRS MST
ASCENSION NO. 266

SIGNIFICANT LEVEL DATA
2410960266
S R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

TABLE 8

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
681.2	3997.3	33.3	13.9	31.0
650.0	5050.8	27.7	4.4	34.0
779.0	7904.8	20.4	9.0	48.0
751.2	8890.1	16.6	7.6	56.0
700.0	10589.3	10.8	3.9	77.0
679.6	11360.1	9.9	2.0	68.0
618.8	13592.9	3.3	-2.6	65.0
593.6	14908.3	.5	-3.6	74.0
561.0	16662.6	-1.5	-28.1	19.0
545.0	17508.9	-2.5	-17.7	29.0
513.6	18765.5	-6.4	-24.1	23.0
500.0	19865.4	-5.4	-29.4	14.0
446.4	22355.3	-11.0	-36.2	14.0
400.0	25101.0	-16.2	-36.1	13.0
314.0	30950.3	-28.2	-46.7	15.0
308.0	32029.7	-31.0	-49.0	15.0
250.0	38196.0	-41.3		
227.0	40861.0	-45.9		
200.0	43869.8	-51.2		
150.0	47043.3	-64.6		
131.0	49754.9	-68.0		
100.0	55120.9	-67.0		
81.6	59148.4	-65.0		
70.0	62259.3	-64.2		
65.2	63394.4	-61.2		
50.0	69212.6	-55.6		
33.6	76308.9	-54.5		
33.4	77761.6	-50.7		
30.0	80056.6	-48.5		
20.0	88395.0	-48.0		
15.0	93289.4	-43.6		
12.4	99465.5	-43.0		
10.0	104356.9	-36.6		
9.6	105294.9	-36.3		

STATION ALTITUDE 3997.30 FEET MSL
9 AUG. 79 1200 HRS MST
ASCENSION NO. 266

UPPER AIR DATA
22100C0269
S M R

GEODETIC COORDINATES
32.46034 LAT DEG
106.42307 LON DEG

TABLE 9

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(T.)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3997.3	881.2	33.3	13.9	31.0	994.9	634.3	150.0	4.1	1.000286
4000.0	881.1	33.3	13.9	31.0	994.9	634.3	150.1	4.1	1.000286
4500.0	836.3	30.6	12.3	32.4	957.2	631.1	166.9	4.7	1.000279
5000.0	851.6	26.0	10.6	33.8	979.0	627.0	174.2	5.4	1.000272
5500.0	837.0	25.4	10.3	36.5	967.8	626.2	181.7	6.3	1.000269
6000.0	822.6	25.0	10.2	39.5	956.8	624.9	187.3	7.3	1.000266
6500.0	808.4	23.5	9.9	42.1	946.9	623.9	191.5	8.4	1.000263
7000.0	794.5	22.0	9.5	44.8	936.2	622.2	194.8	9.5	1.000260
7500.0	780.8	20.6	9.1	47.6	926.8	620.6	197.3	9.4	1.000256
8000.0	767.1	18.3	8.6	51.8	916.3	618.9	200.0	8.6	1.000252
8500.0	753.6	16.9	7.9	55.3	906.2	617.3	203.3	7.8	1.000249
9000.0	740.2	15.4	7.8	60.4	896.8	615.8	205.0	6.9	1.000246
9500.0	727.0	13.9	7.6	65.6	887.4	614.3	206.6	5.9	1.000244
10000.0	714.0	12.4	7.3	71.1	878.2	612.8	208.9	5.0	1.000241
10500.0	701.2	10.9	7.0	76.5	869.2	611.4	195.6	4.3	1.000238
11000.0	688.6	10.3	4.3	66.4	862.4	610.3	182.3	3.7	1.000227
11500.0	676.1	9.5	1.8	58.4	854.9	609.3	177.5	3.5	1.000218
12000.0	663.7	8.2	.9	59.6	846.0	608.7	174.0	3.2	1.000214
12500.0	651.5	6.9	-.0	61.2	837.5	607..	170.6	3.0	1.000209
13000.0	639.5	5.6	-1.0	62.8	829.2	606.5	170.1	2.8	1.000205
13500.0	627.9	4.3	-1.9	63.6	820.7	605.0	148.6	2.9	1.000201
14000.0	616.5	3.0	-2.7	65.9	812.0	603.4	141.7	3.1	1.000198
14500.0	605.3	1.7	-3.1	70.0	804.1	602.9	74.5	3.4	1.000195
15000.0	594.5	.5	-3.7	73.6	796.4	601.4	48.0	5.2	1.000191
15500.0	583.4	-.2	-3.1	65.2	788.6	599.8	39.0	7.4	1.000182
16000.0	572.4	-.9	-13.8	36.5	780.0	598.3	35.5	9.2	1.000173
16500.0	561.6	-1.5	-21.9	19.3	771.5	596.8	32.6	10.5	1.000165
17000.0	550.9	-2.3	-18.9	26.5	763.3	595.3	31.1	12.2	1.000164
17500.0	539.5	-3.2	-19.8	22.6	755.7	593.8	29.8	14.0	1.000162
18000.0	529.2	-4.5	-20.6	26.5	748.7	592.3	28.5	16.4	1.000159
18500.0	519.1	-5.7	-22.9	24.2	741.0	590.7	20.3	18.1	1.000156
19000.0	509.1	-6.4	-20.6	20.0	734.5	589.5	17.3	17.0	1.000152
19500.0	499.3	-6.5	-29.5	14.0	727.0	588.0	9.8	15.7	1.000148
20000.0	489.6	-7.3	-30.1	14.0	721.2	586.4	5.9	13.7	1.000145
20500.0	480.1	-8.0	-30.8	14.0	714.7	584.9	9.6	14.4	1.000143
21000.0	470.8	-8.8	-31.4	14.0	708.5	583.5	10.5	16.4	1.000141
21500.0	461.5	-9.6	-32.1	14.0	702.1	582.0	20.4	16.7	1.000138
22000.0	452.7	-10.4	-32.7	14.0	696.1	580.5	25.9	17.0	1.000136
22500.0	443.8	-11.3	-33.4	13.9	690.2	579.0	27.0	15.7	1.000133
23000.0	435.0	-12.2	-34.3	13.8	684.7	577.4	30.3	14.6	1.000131

STATION ALTITUDE 3997.30 FEET MSL
9 AUG. 79 1200 HRS MST
ASCENSION NO. 266

UPPER AIR DATA
22100D0265
S M R

GEODETIC COORDINATES
32.46034 LAT DEG
106.42307 LON DEG

TABLE 9 (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(T)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	426.4	-13.2	-35.2	13.6	571.3	688.2	31.0	15.4	1.000129
24000.0	418.0	-14.1	-36.1	13.4	562.0	627.1	31.5	16.2	1.000127
24500.0	409.7	-15.1	-37.0	13.2	552.9	625.9	30.0	16.7	1.000125
25000.0	401.6	-16.0	-37.9	13.0	544.0	624.6	30.4	17.4	1.000122
25500.0	393.5	-17.0	-38.7	13.1	535.0	623.5	31.7	18.1	1.000120
26000.0	385.4	-18.0	-39.4	13.3	526.2	622.3	32.0	18.8	1.000118
26500.0	377.5	-19.1	-40.1	13.5	517.5	621.0	31.5	19.6	1.000116
27000.0	369.8	-20.1	-40.8	13.6	509.0	619.8	29.1	20.5	1.000114
27500.0	362.2	-21.1	-41.5	13.8	500.6	618.5	28.4	21.5	1.000112
28000.0	354.8	-22.1	-42.3	14.0	492.4	617.3	25.7	22.4	1.000111
28500.0	347.6	-23.2	-43.0	14.2	484.3	616.0	27.4	23.1	1.000109
29000.0	340.5	-24.2	-43.7	14.3	476.3	614.7	32.0	23.6	1.000107
29500.0	333.5	-25.2	-44.5	14.5	468.5	613.5	35.2	23.7	1.000105
30000.0	326.7	-26.2	-45.2	14.7	460.9	612.2	36.1	23.7	1.000103
30500.0	320.0	-27.3	-46.0	14.8	453.3	610.9	39.5	23.1	1.000102
31000.0	313.4	-28.3	-46.7	15.0	445.9	609.6	42.2	22.4	1.000100
31500.0	306.8	-29.5	-47.6	15.0	438.9	608.6	45.4	21.6	1.000098
32000.0	300.4	-30.9	-48.9	15.0	432.0	608.4	49.0	21.0	1.000097
32500.0	294.9	-32.2	-51.0	13.0**	426.8	608.8	52.0	20.8	1.000095
33000.0	289.5	-33.4	-53.2	11.5**	421.6	609.2	53.8	20.7	1.000093
33500.0	284.3	-34.6	-53.6	9.7**	416.9	609.7	56.9	20.9	1.000092
34000.0	279.2	-35.9	-52.2	7.9**	412.1	610.4	48.0	21.2	1.000090
34500.0	274.3	-37.1	-51.2	6.1**	407.4	611.5	45.7	21.4	1.000089
35000.0	269.4	-38.3	-54.7	4.3**	402.8	612.6	43.5	21.5	1.000087
35500.0	264.8	-39.6	-69.4	2.5**	398.4	613.8	44.3	20.7	1.000086
36000.0	252.2	-40.8	-78.5	.7**	387.1	614.8	45.0	19.9	1.000084
36500.0	240.6	-42.1			377.0	615.2	47.3	19.8	1.000083
37000.0	241.1	-43.4			369.5	615.0	49.5	19.8	1.000081
37500.0	235.7	-44.7			359.4	615.0	52.2	21.2	1.000080
38000.0	230.4	-46.0			351.4	615.1	54.7	22.6	1.000079
38500.0	225.2	-47.2			343.2	615.0	59.1	22.3	1.000077
39000.0	220.1	-48.5			340.5	614.9	63.9	21.7	1.000076
39500.0	215.1	-48.7			333.8	613.9	65.5	19.5	1.000074
40000.0	210.1	-49.0			327.4	612.8	67.5	17.4	1.000073
40500.0	205.3	-50.3			321.0	611.8	68.1	16.8	1.000071
41000.0	200.6	-51.1			314.8	610.8	69.0	16.3	1.000070
41500.0	195.9	-52.2			308.8	609.8	75.6	16.1	1.000069
42000.0	191.2	-53.3			303.0	608.7	81.5	16.0	1.000067
42500.0	186.7	-54.4			297.3	607.6	82.7	14.4	1.000066
43000.0	182.3	-55.5			291.8	606.7	84.1	12.7	1.000065

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3997.30 FEET MSL
9 AUG. 79 1200 HRS MST
ASCENSION NO. 206

UPPER AIR DATA
82100[illegible]200
S [illegible] R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

TABLE 9 (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (T)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
45500.0	177.9	-5[illegible].6			2[illegible].3	57[illegible].4	7[illegible].2	11.3	1.000064
46000.0	173.7	-57.8			2[illegible].9	57[illegible].7	5[illegible].0	10.7	1.000063
46500.0	169.6	-58.9			27[illegible].7	57[illegible].6	45.7	11.5	1.000061
47000.0	165.5	-60.0			27[illegible].6	5[illegible].8	37.4	13.1	1.000060
47500.0	161.6	-61.1			26[illegible].5	5[illegible].5	35.0	14.3	1.000059
48000.0	157.8	-62.2			2[illegible].[illegible]	5[illegible].[illegible]	42.0	14.[illegible]	1.000058
48500.0	154.0	-63.4			2[illegible].[illegible]	5[illegible].[illegible]	49.[illegible]	13.9	1.000057
49000.0	150.4	-64.5			25[illegible].9	5[illegible].7	50.8	13.9	1.000056
49500.0	146.7	-65.2			25[illegible].6	5[illegible].[illegible]	56.4	14.3	1.000055
50000.0	143.0	-65.8			24[illegible].3	5[illegible].[illegible]	70.9	14.7	1.000054
50500.0	139.5	-66.4			23[illegible].1	5[illegible].[illegible]	84.6	15.4	1.000052
51000.0	136.0	-67.1			23[illegible].0	5[illegible].[illegible]	91.9	15.6	1.000051
51500.0	132.7	-67.7			22[illegible].[illegible]	5[illegible].[illegible]	90.9	15.5	1.000050
52000.0	129.4	-68.3			21[illegible].7	5[illegible].[illegible]	100.2	15.4	1.000049
52500.0	126.2	-67.9			21[illegible].1	5[illegible].[illegible]	106.[illegible]	14.7	1.000048
53000.0	123.0	-67.8			20[illegible].7	5[illegible].[illegible]	111.7	14.1	1.000046
53500.0	120.0	-67.7			20[illegible].4	5[illegible].[illegible]	112.2	14.2	1.000045
54000.0	117.0	-67.6			19[illegible].3	5[illegible].[illegible]	112.4	14.4	1.000044
54500.0	114.1	-67.5			19[illegible].3	5[illegible].[illegible]	111.[illegible]	14.6	1.000043
55000.0	111.3	-67.4			18[illegible].4	5[illegible].[illegible]	109.[illegible]	15.4	1.000042
55500.0	108.5	-67.3			18[illegible].[illegible]	5[illegible].[illegible]	107.[illegible]	15.9	1.000041
56000.0	105.8	-67.2			17[illegible].6	5[illegible].[illegible]	106.1	15.6	1.000040
56500.0	103.2	-67.1			17[illegible].4	5[illegible].[illegible]	105.1	15.4	1.000039
57000.0	100.6	-67.0			17[illegible].0	5[illegible].[illegible]	107.[illegible]	15.1	1.000038
57500.0	98.1	-67.0			16[illegible].8	5[illegible].[illegible]	114.[illegible]	14.9	1.000037
58000.0	95.7	-66.9			16[illegible].[illegible]	5[illegible].[illegible]	114.1	15.0	1.000036
58500.0	93.3	-66.9			15[illegible].[illegible]	5[illegible].[illegible]	112.[illegible]	16.0	1.000035
59000.0	91.0	-66.8			15[illegible].7	5[illegible].[illegible]	116.[illegible]	17.0	1.000034
59500.0	88.8	-65.8			14[illegible].6	5[illegible].7	120.7	16.6	1.000033
60000.0	86.6	-66.7			14[illegible].1	5[illegible].[illegible]	123.4	16.0	1.000033
60500.0	84.4	-66.7			14[illegible].4	5[illegible].6	124.6	14.5	1.000032
61000.0	82.3	-66.6			13[illegible].9	5[illegible].9	122.6	11.4	1.000031
61500.0	80.3	-[illegible].[illegible]			13[illegible].[illegible]	5[illegible].[illegible]	1[illegible].[illegible]	8.3	1.000030
62000.0	78.3	-65.9			12[illegible].7	5[illegible].[illegible]	100.1	8.2	1.000029
62500.0	76.4	-65.5			12[illegible].2	5[illegible].[illegible]	93.6	9.1	1.000029
63000.0	74.5	-65.2			1[illegible].8	5[illegible].8	88.[illegible]	10.7	1.000028
63500.0	72.7	-64.8			12[illegible].3	5[illegible].[illegible]	89.3	13.3	1.000027
64000.0	70.9	-64.4			11[illegible].3	5[illegible].9	84.6	15.9	1.000026
64500.0	69.2	-63.9			11[illegible].3	5[illegible].6	80.7	18.5	1.000026
65000.0	67.5	-63.2			11[illegible].[illegible]	5[illegible].[illegible]	73.7	21.3	1.000025

STATION ALTITUDE 3937.30 FEET MSL
9 AUG. 79 1200 HRS MST
ASCENSION NO. 206

UPPER AIR DATA
22120602CC
S M R

TABLE 9 (Cont)

GEODETIC COORDINATES
32.46034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(T.)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
03500.0	05.9	-61.1			1062	567.3	71.0	24.6	1.000024
04000.0	04.3	-60.7			1054	567.3	70.2	25.9	1.000023
04500.0	02.5	-60.3			1047	566.3	69.0	27.2	1.000023
05000.0	01.2	-59.9			1041	566.0	68.1	27.7	1.000022
05500.0	59.5	-59.5			97.3	565.4	95.4	25.3	1.000022
06000.0	58.4	-59.1			93.6	565.2	112.4	24.2	1.000021
06500.0	57.0	-58.7			92.6	570.4	122.4	22.8	1.000021
07000.0	55.6	-58.3			89.2	571.8	120.6	19.9	1.000020
07500.0	54.3	-58.0			87.9	572.3	100.6	17.4	1.000020
08000.0	53.0	-57.6			85.7	572.8	101.5	15.2	1.000019
08500.0	51.7	-57.2			83.5	572.5	119.3	13.6	1.000019
09000.0	50.5	-56.8			81.3	573.1	100.6	12.8	1.000018
09500.0	49.3	-56.5			79.3	573.4	93.8	13.4	1.000018
10000.0	48.2	-56.4			77.4	573.6	86.6	14.3	1.000017
10500.0	47.0	-56.2			75.5	573.8	82.8	15.5	1.000017
11000.0	45.9	-56.1			73.7	574.0	82.5	16.9	1.000016
11500.0	44.9	-55.9			71.9	574.2	82.2	18.2	1.000016
12000.0	43.8	-55.8			70.2	574.4	82.0	20.1	1.000015
12500.0	42.8	-55.6			68.5	574.6	83.5	22.4	1.000015
13000.0	41.8	-55.5			66.9	574.8	84.2	24.8	1.000015
13500.0	40.8	-55.3			65.4	575.0	84.8	26.3	1.000015
14000.0	39.8	-55.2			63.7	575.1	83.8	27.4	1.000014
14500.0	38.9	-55.0			62.1	575.3	83.2	28.6	1.000014
15000.0	38.0	-54.9			60.5	575.5	84.4	29.3	1.000014
15500.0	37.1	-54.8			59.2	575.7	85.4	29.7	1.000013
16000.0	36.2	-54.6			57.8	575.9	86.4	30.2	1.000013
16500.0	35.4	-54.1			56.3	576.5	91.8	30.8	1.000013
17000.0	34.6	-52.7			54.8	576.4	94.1	31.7	1.000012
17500.0	33.8	-51.3			53.0	576.2	97.1	32.6	1.000012
18000.0	33.0	-50.4			51.8	581.4	100.6	33.4	1.000011
18500.0	32.2	-50.0			50.3	582.0	102.9	34.1	1.000011
19000.0	31.5	-49.5			49.1	582.6	105.8	34.8	1.000011
19500.0	30.8	-49.0			47.8	583.2	108.4	35.1	1.000011
20000.0	30.1	-48.6			46.7	583.9	111.3	32.9	1.000010
20500.0	29.4	-48.5			45.6	583.9	114.5	30.8	1.000010
21000.0	28.7	-48.4			44.5	584.0	116.3	26.8	1.000010
21500.0	28.1	-48.4			43.5	584.0	117.6	27.1	1.000010
22000.0	27.4	-48.4			42.5	584.2	114.8	25.5	1.000009
22500.0	26.8	-48.4			41.5	584.1	112.4	24.0	1.000009
23000.0	26.2	-48.3			40.6	584.2	107.6	23.3	1.000009

STATION ALTITUDE 3997.00 FEET MSL
9 AUG. 79 1200 HRS MST
ASCENSION NO. 266

UPPER AIR DATA
2210009200
S & R

TABLE 9 (Cont)

GEODETIC COORDINATES
32.46034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(T.N.)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
83500.0	25.6	-46.3			3[illegible].7	5[illegible]..	101.0	23.5	1.000009
84000.0	25.0	-42.3			3[illegible].6	5[illegible].2	95.5	24.0	1.000009
84500.0	24.5	-[illegible].2			37.9	5[illegible].2	90.3	25.1	1.000008
85000.0	23.9	-46.2			37.8	5[illegible].3	87.4	27.5	1.000008
85500.0	23.4	-[illegible].2			3[illegible].2	5[illegible].3	84.9	29.9	1.000008
86000.0	22.8	-[illegible].2			3[illegible].4	5[illegible].4	82.9	32.4	1.000008
86500.0	22.3	-[illegible].1			3[illegible].5	5[illegible].4	82.7	33.3	1.000008
87000.0	21.8	-46.1			3[illegible].6	5[illegible].4	82.6	33.9	1.000008
87500.0	21.3	-45.1			3[illegible].8	5[illegible].5	82.8	34.5	1.000007
88000.0	20.8	-45.1			3[illegible].2	5[illegible].5	83.1	34.6	1.000007
88500.0	20.4	-46.0			3[illegible].3	5[illegible].3	83.4	34.0	1.000007
89000.0	19.9	-47.9			3[illegible].6	5[illegible].7	83.6	33.5	1.000007
89500.0	19.5	-47.6			3[illegible].1	5[illegible].1	84.1	33.3	1.000007
90000.0	19.0	-47.2			2[illegible].3	5[illegible].3	84.1	33.2	1.000007
90500.0	18.6	-[illegible].9			2[illegible].0	5[illegible].0	84.0	37.0	1.000006
91000.0	18.2	-46.5			27.9	5[illegible].3	83.9	38.9	1.000006
91500.0	17.8	-[illegible].2			27.3	5[illegible].2	84.1	39.2	1.000006
92000.0	17.4	-[illegible].6			2[illegible].9	5[illegible].4	84.4	39.1	1.000006
92500.0	17.0	-45.5			2[illegible].0	5[illegible].0	84.7	38.9	1.000006
93000.0	16.6	-45.2			2[illegible].4	5[illegible].2	84.9	38.0	1.000006
93500.0	16.2	-44.8			2[illegible].8	5[illegible].7	84.9	39.8	1.000006
94000.0	15.9	-44.5			2[illegible].2	5[illegible]..	85.0	40.7	1.000005
94500.0	15.5	-44.1			2[illegible].0	5[illegible].0	85.0	41.6	1.000005
95000.0	15.2	-43.8			2[illegible].3	5[illegible].0	84.9	42.7	1.000005
95500.0	14.8	-43.6			2[illegible].3	5[illegible].3	84.0	44.3	1.000005
96000.0	14.5	-43.5			2[illegible].6	5[illegible].4	84.0	45.8	1.000005
96500.0	14.2	-43.4			21.9	5[illegible].5	84.5	47.4	1.000005
97000.0	13.9	-43.4			2[illegible].6	5[illegible].6	85.2	48.5	1.000005
97500.0	13.6	-43.3			2[illegible].5	5[illegible].7	87.2	49.5	1.000005
98000.0	13.3	-43.2			2[illegible].1	5[illegible].7	89.2	50.4	1.000004
98500.0	13.0	-43.1			1[illegible].0	5[illegible].0	91.1	51.4	1.000004
99000.0	12.7	-43.1			19.2	5[illegible].9	92.7	52.4	1.000004
99500.0	12.4	-43.0			1[illegible].3	5[illegible].0	94.0	53.3	1.000004
100000.0	12.1	-42.3			1[illegible].3	5[illegible].9	95.3	54.2	1.000004
100500.0	11.9	-41.7			17.6	5[illegible].7	96.3	55.1	1.000004
101000.0	11.6	-41.1			17.4	5[illegible].5	96.8	54.4	1.000004
101500.0	11.3	-40.4			17.3	5[illegible].3	96.3	52.4	1.000004
102000.0	11.1	-39.8			17.5	5[illegible].2	95.8	50.4	1.000004
102500.0	10.9	-39.2			17.7	5[illegible].9	95.2	48.4	1.000004
103000.0	10.6	-38.5			17.8	5[illegible].7			1.000004

STATION ALTITUDE 3997.30 FEET MSL
9 AUG. 79 1200 HRS MST
ASCENSION NO. 266

UPPER AIR DATA
22100C0266
S M R

TABLE 9 (Cont)

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(T.N.)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
103500.0	10.4	-37.9			15.4	567.5			1.000003
104000.0	10.2	-37.3			15.0	569.3			1.000003
104500.0	9.9	-36.7			14.6	569.0			1.000003
105000.0	9.7	-36.3			14.3	569.4			1.000003

STATION ALTITUDE 3997.30 FEET MSL
9 AUG. 79 1200 HRS MST
ASCENSION NO. 206

MANDATORY LEVELS
22100000200
S M P

GEODETIC COORDINATES
32.46034 LAT DEG
106.42307 LON DEG

TABLE 10

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	5053.	27.7	10.-	34.	175.1	5.5
800.0	6801.	22.6	9.7	44.	193.0	9.0
750.0	8627.	16.5	7.0	50.	204.0	7.5
700.0	10539.	10.8	6.9	77.	192.7	4.2
650.0	12537.	6.8	-.1	51.	177.0	3.0
600.0	14630.	1.2	-3.3	72.	50.3	4.0
550.0	16823.	-2.3	-16.9	27.	32.1	12.1
500.0	19132.	-5.4	-29.4	14.	20.2	15.9
450.0	22110.	-10.7	-32.9	14.	24.7	16.6
400.0	25059.	-16.2	-36.1	13.	30.7	17.5
350.0	28314.	-22.8	-42.8	14.	26.0	22.9
300.0	31965.	-31.0	-49.0	13.	49.7	24.0
250.0	36118.	-41.3			46.2	19.7
200.0	40994.	-51.2			70.2	10.3
175.0	43777.	-57.4			89.4	10.7
150.0	46920.	-64.6			89.3	13.9
125.0	50537.	-67.8			109.4	14.5
100.0	54943.	-67.0			106.3	15.1
80.0	59374.	-66.3			116.5	8.6
70.0	62042.	-64.2			84.2	17.1
60.0	65162.	-59.2			95.4	25.7
50.0	68950.	-56.6			101.7	15.0
40.0	73602.	-55.2			83.7	27.1
30.0	79711.	-46.5			111.4	32.6
25.0	83689.	-46.3			95.7	24.0
20.0	88476.	-43.0			33.7	33.6
15.0	94750.	-43.6			84.9	43.3
10.0	103760.	-36.2				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.